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Roads, marketization and social exclusion in Southeast Asia

What do roads do to people?

Roads in national development planning

For governments in Southeast Asia, the integration of marginal areas and populations is seen as a central, and in some cases even guiding, development objective. This is driven by two imperatives.

First is the need to integrate marginal populations into the political mainstream as part of a nation-building and security-enhancing exercise. From the forests of Irian Jaya to the hills of northern Thailand and the Lao People's Democratic Republic, roads have traditionally been viewed as the principal means of securing remote and marginal areas and quelling the forces of insurrection. Roads have become, in this context, emblematic of a state's ability to infiltrate and dominate geographical space and impose itself on the people inhabiting that space (see Scott 1998). For insurgency movements and opponents of the state, roads have come, conversely, to symbolize oppression.

But there is a second imperative that has received rather less attention but which has become, in recent years, the primary rationale for building roads: market integration. This is founded on the belief that poverty has a strong spatial component and that it is concentrated in those areas where the market has a weak presence. Not only do roads allow the market to infiltrate peripheral areas, but roads also permit the inhabitants of those areas to access the jobs, services, and higher standards of living in the core (or semi-periphery). Thus road building becomes the primary means of bringing development to people living at the margins of the state, drawing them into the 'mainstream' of politics, economy, and society.¹

This distinction may be clear enough as recounted here, but in practice the two rationales – security enhancement and market integration – merge.

¹ Using 'mainstream' here is an intentional link with the literature on social exclusion.

For example, for the hill peoples of mainland Southeast Asia, road building has been closely linked with policies of sedentarization (Salemink 2000). Sedentarization is designed to control people by firmly embedding them in space, permitting the state to tax, count, and supervise (Thongchai Winichakul 1994). It also permits the state to educate people and, in this way, make them 'modern'. Modernity involves changing mindsets and world views, not just providing people with the material components of development. Roads, thus, are the conduit by which the market and the state introduce new ideas and belief systems.²

Kundstadter (2000), writing of economic change among the Hmong of northern Thailand between 1960 and 1990, sees roads as the critical linking element in the sequence of transformations he describes. Roads permitted the Thai government to control people and enforce its policies; they allowed the state to deliver services; they were instrumental in encouraging the demise of subsistence shifting cultivation; they brought the market into the hills (and the people of the hills to the market); and they encouraged and permitted the move into cash cropping. 'Without roads', Kundstadter (2000:168-9) writes, 'many of these changes would have been impossible or economically impractical'. De Koninck (2000:17) describes a similar process in his account of frontier development in highland Vietnam where roads are, he says, a 'tool of geo-political management as well as a tool of economic growth'.

These two perspectives represent the orthodox take on the impacts – and utility – of roads. However, there is also a radical, post-structuralist perspective in which roads do not ameliorate poverty, but create and then accentuate poverty by forcing people to become marginal players in the mainstream. This, of course, turns the association noted above on its head. No longer do roads reduce poverty by drawing marginal groups into the mainstream; instead they create marginality (and poverty) by integrating groups into the mainstream on highly 'unfavourable' terms. While this perspective is more commonly associated with radical scholars (for example, post-developmentalists), it has also begun to influence – or at least left its mark on – the thinking of more mainstream organizations. For example, a recent participatory poverty assessment undertaken by the Asian Development Bank (ADB) in the Lao People's Democratic Republic (Lao PDR 2001) makes a sustained case for what might be termed 'policy-induced poverty'. In particular, the Lao government's resettlement of swidden cultivators as part of the Land-Forest Allocation programme is seen as a key cause of hardship (see below for further discussion).

In other words, there appears to be some merging of the orthodox and radical takes on the effects of road-building. It is recognized that not only

² This, admittedly, goes too far in creating a binary opposition. Even people on the peripheries had access to the market and were probably more commercially inclined than many scholars have often assumed.

does physical isolation perpetuate poverty and limit the scope of (positive) state intervention in people's lives but that it may also harm some groups and, even at a general village level, lead to a decline in livelihoods.

A road-building half-century

The period since the end of the Second World War has seen Southeast Asia progressively infiltrated by roads (Johnston 1998:1; see also Dick and Forbes 1992; Singhanetra-Renard 1999:72). Out of the region's 500 million inhabitants there are few today who are truly isolated from the market or from the tendrils of the state. Even in areas that would seem to be at the edge of the world, integration is proceeding apace. This is clear, for example, in Healey's description of outlying villages on Aru, itself a peripheral portion of marginal Maluku in eastern Indonesia. Villagers here may still engage in subsistence farming, but even so '[t]he social isolation of the self-sufficient local village community is [...] overlain [with] its encapsulation within, and participation in, the nation state and wider modern world' (Healey 1996:23). Elmhirst (1998a:4) likewise notes how Tiuh Baru, a village in a relatively remote corner of the Sumatran province of Lampung, is now less than a 24-hour overland and ferry trip away from Jakarta, 'extending the influence of Indonesia's principal industrial zone into what has hitherto been a remote and inaccessible area'.

It is easy to forget how even villagers living within a few kilometres of major urban administrative centres had, not too many years ago, their economic opportunities constrained because of restricted mobility. Reading *Village Chiang Mai* (Abha Sirivongs Na Ayuthaya et al. 1979) emphasizes this point. The study is based on a sample of three villages in San Kamphaeng district, 13 kilometres east of Chiang Mai in northern Thailand. In 1970, when the research was undertaken, these three villages (and most others in the area) were linked only by laterite roads, many impassable during the wet season. Today San Kamphaeng has been functionally absorbed by the city and all the villages have rapid and easy access to Chiang Mai. Singhanetra-Renard's longitudinal study of Mae Sa (1999), 13 kilometres from Chiang Mai but to the north, also clearly shows how the last thirty years has profoundly altered people's horizons. The minibus arrived in Mae Sa in the 1970s and provided local women with the opportunity to market their agricultural produce in Chiang Mai city. It also brought the city's better schools and expanding employment opportunities within commuting reach of the village (Singhanetra-Renard 1999:72). For Mae Sa, roads and cheap transport facilities transformed the economic (and other) opportunities open to the village's inhabitants. They also served to transform villagers' aspirations.

Table 1. Patterns of poverty and infrastructure in the Lao PDR

	Incidence of poverty (%)	>6 km to main road (% of villages)	No access in wet season (% of villages)	Scheduled passenger transport (% of villages)
<i>Very poor provinces:</i>				
Hua Phan	69.7	66	64	36
Oudomxai	64.7	66	64	32
Phongsaly	56.0	42	68	25
Xayasomboon	52.5	39	55	36
Sekong	49.3	39	43	30
Luang Namtha	48.6	42	69	27
Attapeu	48.0	32	65	18
Simple average	55.5	47	61	29
<i>Poor provinces:</i>				
Saravane	40.8	19	49	47
Luang Phrabang	38.6	48	55	47
Bokeo	38.6	38	59	37
Xieng Khouang	38.0	11	57	41
Khammouane	38.0	38	56	45
Champassak	36.5	37	57	46
Savannakhet	34.5	31	43	38
Simple average	37.9	32	54	43
<i>Better-off provinces:</i>				
Bolikhamxai	22.9	23	51	51
Vientiane	22.3	47	26	58
Xayaburi	18.5	27	53	57
Vientiane municipality	13.7	21	0	91
Simple average	19.4	30	33	64

Sources: Poverty figures World Bank (2001), infrastructure data Lao PDR (1999).

Given the importance of mobility in widening people's life chances, it is not altogether surprising that the distribution of poverty often has an important spatial component. High levels of poverty in Java (Mason 1996), Vietnam (Van de Walle 1996), and the Lao PDR (Lao PDR 2001), for example, have been shown to be closely linked to geographical marginality and levels of infrastructure provision (Table 1). Where transaction costs are high, it seems, the challenge of ameliorating poverty becomes that much more difficult.³

³ Of course critics of this approach to poverty would state that the apparent relationship is spurious to the degree that poverty is 'created'. Income-poverty suffers, it is argued, from being too narrow in its assessment of deprivation. Groups living in remote regions may live meagre lives, but they are not poor.

This is also emphasized in the World Bank's 'Voices of the Poor' studies for Indonesia and Vietnam, where 'isolation' in various guises restricts the scope for marketing surplus production, limits access to job opportunities and government services, and raises costs (World Bank 1999a, 1999b). In the equivalent Thailand study, physical isolation as such is not highlighted as an issue, presumably because the country's physical infrastructure is comparatively well developed (World Bank 1999c).

States, roads, and markets

The balance between this twofold justification for building roads (state domination and market integration) reflects an important change in the way that development is pursued. In the 1960s the state was seen to be the principal player in bringing development to the poor and the marginal. Regional development policy, with its emphasis on roads, growth poles, and the panoply of modernization, was based on the principle that the state brought development to the people. This is well-represented in the Southeast Asian context where development (read: modernity) was the state's side of a bargain with the people. If the people supported the state, then the state would provide – however slowly and unequally – the rudiments of modernity (Hirsch 1989; Rigg et al. 1999; Vandergeest 1991). The close juxtaposition of development as a process, development as an artifice of the state, and development as a state-orchestrated idea akin to modernity and progress, is most clearly enunciated in the example of Indonesia. As Klopfer argues, '[p]embangunan [development] ideology offers the image of backwards Indonesians who require paternal guidance and discipline in order to step up to a higher level of civilization' (Klopfer 1994:344; see also Antlöv 1995:43).

It is accepted that avenues of communication – and in particular, roads – are not built and maintained solely by governments. Other actors, including foreign investors (as part, for example, of BOT, Built-Operate-Transfer, schemes), domestic companies, and communities themselves, are all engaged to some degree as well. Moreover, when states do become engaged in improving communications in marginal areas, they often upgrade existing community-maintained tracks rather than build entirely new roads. However, in the broader context, and especially in the context of this article, governments are the principal actors when it comes to bringing the state (and the market) to the people, and the people to the state (and market).

With the neo-liberal turn of the 1980s the market became – in theory – the means by which the poor could lever themselves out of poverty and into the mainstream. Roads became a quiescent force in the process, providing an avenue out of poverty, but not the means. The means was the market. This

neo-liberal orthodoxy pursued by the IMF, World Bank, and US Treasury has been dubbed the Washington Consensus. In practice, many governments in the Southeast Asian region, to a greater or lesser extent, have continued to emphasize the leading role of the state in stage-managing development. Following the Asian Crisis of 1997, the three Washington-based financial bulwarks accepted the need for a guiding state in some areas of economic management. It may be that yet another twist will emerge as the Post-Washington Consensus, where the role of the state is once again recognized as more than just keeping the peace, coalesces.

Roads, market integration, risk and vulnerability: two stories

[W]e still know all too little about the ways in which rural transport should be improved and how to deliver benefits to more needy populations (Leinbach 2000:2).

The roots of risk in an integrating region

Market integration through road improvements arguably changes the basis of risk for farming families. In the Lao PDR over 50 per cent of GDP is generated by the agricultural sector, and the 1995 census records that 84 per cent of the workforce are engaged in subsistence farming (ADB 2000:176). It has been stated that no rice is marketed in half of the villages in the Lao PDR (World Bank n.d.). For many of these subsistence cultivators, threats to livelihood are natural (environmental) rather than economic: flood and drought, in particular.

As market integration proceeds, so risk becomes increasingly economic in character. Market distortions and economic crises replace natural events as the chief causes of livelihood failures. Furthermore, market integration is likely to create winners and losers. This has been termed 'new' poverty in the context of the Lao PDR because 'it is not an endemic condition [...] [but] the result of events external to the villager' (Lao PDR 2001:vi).

The recent participatory poverty assessment undertaken by the ADB noted above combines both a 'new' and an 'old' perspective on poverty – and one where roads occupy a central place (sometimes implicit rather than explicit) in the explanatory framework as well as in the suggested solutions. On the one hand the study stresses the degree to which patterns of poverty and geographical marginality coincide (Lao PDR 2001:57-79). Thus, 'the problem most cited by villagers as preventing economic growth is lack of all-weather roads' (Lao PDR 2001:117). At the same time, though, the study strenuously argues that subsistence farming should not be equated with poverty.⁴ It is

⁴ In his 1984 seminal work *The Thai village economy in the past*, Chatthip Nartsupha argues much the same. For him, the traditional village community in Thailand (and more widely in the

when subsistence farmers are integrated, usually through road building, that 'new' poverty begins to bite. Some 90 per cent of the poor villages identified were swidden communities and it was the imposition of the Land Allocation Scheme (essentially, sedentarization) that was a major cause of poverty and hardship (Lao PDR 2001:81). It is in the light of this two-track approach to the explanation of poverty that the study states that: 'Although it is true that the majority of the poor in Laos are swidden cultivators, this should not be construed to imply that swiddening causes poverty' (Lao PDR 2001:103).

The role of roads

J. Windle and R.A. Cramb (1999:216), writing of roads and rural development in Sarawak, argue that roads 'have the potential to [...] provide benefits to all groups within a community [...] [and] do not inherently favor the rural elite'. While this may be true in theory, the complex inter-relationships between roads and social and economic differentiation mean that in practice the effects of roads are characteristically mixed. The opportunities that roads provide will be seized by some people as a means of accessing opportunities that previously, and quite literally, lay beyond their reach. But we should not lose sight of the fact that others may find that their traditional livelihoods are squeezed as commodification, driven by road-driven market integration, proceeds. In other words, the effects of roads on people are mixed, and identifying – and understanding – how and why they are mixed, is a key challenge.⁵

Roads not only give opportunities for local people to get out and access new opportunities, but also for outsiders to get in. As well-integrated, agriculturally fertile areas experience increasingly severe resource constraints (shortages of land, land degradation), so inhabitants will be encouraged to move into new areas as they are opened up for settlement and exploitation. An IDRC study of the Nam Ngum watershed in the Lao PDR, for instance, revealed that a traditionally sustainable system of resource management was undermined in the 1970s and 1980s as new settlers, with their own resource

Tai world) was a primordial and self-sufficient unit. 'In the beginning' he quotes a villager as saying, 'things had no price' (Chatthip Nartsupha 1999:16). He also argues that in these pre-modern communities there was no distinct division of labour, no cash, no market, and no class conflict. There was, in turn, no exploitation. Mutual cooperation and assistance, and a community ethic ruled. As modernization advanced, subsistence farmers were unwillingly 'dragged' into the commercial world by the state as it intruded into their formerly bucolic lives. In turn, classes of haves and have-nots emerged and marginal groups were created. Thus Chatthip and his followers stress the degree to which poverty is not so much solved but created by spatial integration. As he writes, 'State and capitalism did not come to develop the village, only to extract benefit from the villagers' (Chatthip Nartsupha 1999:74).

⁵ This, I take it, is one of the points behind Leinbach's statement quoted at the beginning of this section.

management traditions, began to settle in the area and impose new pressures on the system (Shore 2000:2).

The same story is told in Rodolphe De Koninck's paper (2000) on high-land settlement in Vietnam, where lowland settlers in upland areas have forced the country's ethnic minorities to either adapt or retreat. Small groups of Ko Ho people in Lam Dong district (Bao Lam) interviewed by De Koninck in 1999 were unable to exploit the new commercial opportunities (in particular, coffee cultivation) opened up by roads and instead 'were now reduced to working as labourers on the surrounding coffee plots cultivated by Kinh settlers' (2000:17). This is also clear in studies of northern Vietnam that take a longer historical perspective (see, for example, Michaud 2000). It is the process of incorporation, for which roads (radical scholars would suggest) are the Trojan horse, which does most to marginalize local peoples who are, for the most part, ill-prepared and ill-resourced to compete with the newcomers.

It is important to recognize that the failure of some individuals and groups to benefit from road provision (or, possibly, to have actually experienced a decline in well-being) is embedded not just in physical resource constraints, but also in mental resource constraints. Psychological remoteness compounds the challenges set by physical remoteness. But while the latter may be fairly quickly ameliorated by road construction, the former is likely to be confronted only in the longer term. A villager in the Lao PDR's Xieng Khouang province explained his poverty to the ADB team in the following terms:

we have exhausted all of the possibilities at our disposal. It's up to the authorities to bring solutions, or we will have to wait for our children and grandchildren to become educated and lead us to the solutions. (Lao PDR 2001:61.)

For people such as this, 'incorporation' requires a good deal more than building roads.

Geographical marginality = livelihood insecurity?

As outlined above, a powerful case can be made that the integration of peoples into the mainstream has sometimes not only undermined the (relative) equality of the past but also pushed some groups of people from security into insecurity. But there is an equally powerful case that it is those people at the margins who suffer most from poverty and lack of life chances (as reflected in the World Bank's recent poverty studies noted above). To some extent this difference in perspective is rooted in how the poverty/modernity interface is conceptualized. But we cannot put it down to academic and theoretical disagreements alone.

In the Lao PDR, the majority of the disparities in levels of human and

economic development, and government provision of basic amenities, can be linked to physical (geographical) isolation. A key justification for a great many development interventions in the Lao PDR is that poverty is a product of isolation (see, for example, IDN 1998; WFP 1998). This is emphasized in the World Food Programme's summary of the situation in the Lao PDR:

Many studies and informants in Lao PDR note poor road access throughout the country as a major problem to the welfare of communities. Access is not simply a question of roads. Difficult terrain and monsoon rains both contribute to difficulties in providing isolated villages with basic health and education services, as well as allowing people to reach markets and income sources. There is general agreement that the most isolated villages are the most disadvantaged. (WFP 1998:3).⁶

It would seem that the government of the Lao PDR sees food insecurity being most pronounced in 'unmonetized rural areas'. The vice-president of the State Planning Committee, for example, in a summary document outlining the country's national policy for sustainable development, states:

Particular solution for food security must be found in the presence of malnutrition in unmonetized rural areas, where natural disasters vary between droughts and flooding, and where purchasing power, especially that of farmers, is still very low. The Government of the Lao PDR is convinced that, in the end, raising incomes in rural areas will be the best way to ensure that families have access to food available in the market. To achieve this is to complete the transition initiated towards the integration of rural areas into a national market economy. (Samptong Mongkhonvilay n.d.:3.)

Most governments, mainstream economists, and multilateral agencies like the World Bank and the Asian Development Bank have tended to view the problem of (lack of) roads in a decidedly productivist vein (notwithstanding the ADB's participatory poverty assessment discussed above). The reason why poverty is concentrated in peripheral rural areas is because the agricultural sector is 'held back by undeveloped market systems' and agricultural productivity constrained 'due to inadequate rural infrastructure' (World Bank n.d.). For the Bank, therefore, road-building and integration are central elements in any programme designed to reduce poverty and improve standards of living.

⁶ This is also noted by Samptong Mongkhonvilay who writes, rhetorically: 'Indeed, how can one reach most of the rural areas if there is not a minimum access to them, if they are not opened up and provided the means to escape a subsistence level of production, integrate into the market economy, raise agriculture output, and generate rural incomes and improve social services?' (Samptong Mongkhonvilay n.d.).

Reconciliation?

The discussion above has taken a rather essentialist view of what we might term the neo-liberal and radical perspectives on roads and their socio-economic effects. Having, rather unfairly, stereotyped the two approaches and set up a neat binary opposition, I now take the opportunity to try to reconcile the two positions.

The first point to stress is that the importance that the state places on control is nothing new in the context of Southeast Asia. Pre-colonial kingdoms in the region went to considerable lengths to maintain a tight grip on their populations. Wealth, as historians have noted, was founded on people, not on land (Scott 1998; Reid 1988; Jerndal and Rigg 1998). What changed, with modernization, is that the acquisition of land and its measurement, mapping, and marking came to be just as important as the control of the people who inhabited the land. Nor was market exchange quite as new and revolutionary as is often assumed (Rigg 2001). In other words, the vision of the past purveyed by the populists (like Chatthip in footnote 5) – of rural spaces where peasants lived largely self-contained, subsistence lives – is open to serious doubt. In turn, the characterization of these geographical spaces as areas where social and economic differences (inequality) were at a minimum is also problematic.

This, though, does not detract from the point that the construction of roads did change the intensity with which states intervened in people's lives, and the degree to which the market (and market consciousness) could infiltrate livelihoods:

The techniques devised to enhance the legibility of a society to its rulers have become vastly more sophisticated, but the political motives driving them have changed little. Appropriation, control, and manipulation (in the nonpejorative sense) remain the most prominent. (Scott 1998:77.)

For Scott, states are engaged in a project to make societies 'legible'. Illegible or opaque societies – ones that are not adequately mapped, counted, and manipulated – are societies that the state can only rudimentarily control. The problem of the post-structural position, namely that roads create poverty and vulnerability, is that the principle avenue for reducing poverty and vulnerability is, it would seem, to exploit roads to their full advantage. This rather contradictory statement is best illuminated through a case study from Thailand.

A case study: Tambon Thung Sadok

Tambon Thung Sadok lies around twenty-five kilometres south of Chiang Mai in Sanpathong district.⁷ It is a sub-district that has been extensively researched over the years, giving us a good idea of the trajectory of social and economic differentiation over the last half century or so.

By 1900 the villages of the area were probably already engaged in the commercial cultivation of crops like *miang*,⁸ tobacco, cotton, and soybeans, albeit on a comparatively minor scale. With the completion of the rail link between Bangkok and Chiang Mai in 1922, commercialization deepened and accelerated. But commercialization during the decades through to 1970 was grafted onto the existing subsistence system; it was not a case, by and large, of commercial production displacing subsistence production.

Anan Ganjanapan (1986:394), who worked in the local village of Ban San Pong, writes of a 'crisis of subsistence' in the 1970s. By this time, the frontier in farmland expansion had been exhausted and average landholdings were beginning to shrink. Notwithstanding an increase in yields as new production technologies were embraced, the overall outcome was a gradual erosion of subsistence. For most observers, land remained the strategic resource and the key development challenge was how to increase output from the land so as to sustain livelihoods.

At the end of the twentieth century, the development challenge confronting the inhabitants of Tambon Thung Sadok, and of which Anan wrote so convincingly, was very different from that of thirty years earlier. Land was no longer a strategic resource. The core of livelihoods, for many residents, had shifted from farm to non-farm activities. This is not to say that land had become worthless – the degree of land speculation in certain areas of northern Thailand (and elsewhere in the region) shows that in some instances land can be extremely valuable. Moreover, the most valuable land is often located along roads, for obvious reasons. But there had, nonetheless, been a deagrarianization of livelihoods in Tambon Thung Sadok during the latter years of the twentieth century.

How does the roads issue fit in with this sequence of change? Clearly, the processes of social and economic differentiation were closely linked to improvements in transportation. Before the 1970s roads did not so much undermine subsistence as provide the means to develop commercial production alongside the existing subsistence system. This was only undermined

⁷ For a fuller account of the agrarian transition in the area, see Rigg and Sakunee Nattapoolwat (2001).

⁸ *Miang* is a fermented tea that is wrapped around salt or sugar; it was only grown and consumed in the northern region of Thailand.

as land became an increasingly scarce resource. Certainly roads played an important part in providing additional scope for accumulation by the already rich and powerful, but even without this concentration of power and wealth it is likely that Anan's 'crisis of subsistence' would have arisen. Importantly, the way in which the inhabitants in the area have confronted this crisis has not (mainly) been through intensifying agricultural production, but by shifting from subsistence agriculture to market-based agricultural production. In these terms, the availability of cheap and efficient transport has been a critical component in sustaining livelihoods in a context where traditional strategies are under pressure.

Three of the most important sources of non-farm work in the area are factory work in Lamphun, construction work in Chiang Mai, and village-based piecework. The former two activities are indicative of a delocalization of work. Both are dependent on (for the most part) young women and men being able to commute to work over a distance of twenty-five or thirty kilometres. Piecework depends on companies based outside the village being able to truck materials to the pieceworkers, and then collect the finished articles. Without roads it is hard to envisage these activities being economically feasible or attractive.

The experience of Tambon Thung Sadok challenges the populist assumption that market integration, propelled by improving transportation, has undermined the security of the past. For the villagers of this sub-district, roads offer the best means to offset the gradual erosion of agriculture's ability to provide for their needs. Without roads, it is suggested, the villages of the area would have experienced even greater rural out-migration as the poor searched out work to sustain their diminishing *in situ* livelihoods.

The foregoing case study should not be taken to imply that everyone wins – or at least wins to the same degree. The poorer sections of village society lack the funds and contacts to set up businesses to exploit roads to their full advantage. In some societies women's mobility is constrained for cultural reasons (see, for example, Elmhirst's work on Lampung (1998a, 1998b, 2000) and the papers in Koning et al. 2000). The elderly may also find that their skills, and in particular their lack of formal education, cause them to become marginalized in agriculture (Rigg and Sakunee Nattapoolwat 2001). And women with dependent children may also find that household demands keep them at home (see Rodenburg 2000). In other words, there is a range of cultural, social, and economic reasons – which often coalesce – why roads offer unequal opportunities to different groups. Roads, in themselves, may not create these conditions, but by offering avenues for accumulation to subsets of society, whether intra- or inter-household, they are central components in any explanation.

Summary

This article has addressed the role of roads in human development. Rather unfairly, it set up an opposition between a neo-liberal and a radical take on roads. This was then reconciled by justifying each perspective within a historical sequence of change (Figure 1).

Figure 1. Roads and livelihoods: pre-modern to post-modern

1. *Pre-modern* – frugal lives (simple and subsistence)

Limited contact with wider world

Subsistence orientation

Agriculture focused

Limited commercialization

Limited inequality

Abundant physical resources



2. *Early-modern* – frugal lives with emerging destitution (undermining of subsistence)

Emerging contacts with wider world

Subsistence orientation

Agriculture focused

Commercial production grafted onto system

Deepening inequality

Physical resources under pressure



3. *Modern* – destitution and accumulation

Established contacts with wider world

Emerging tensions between subsistence and commercial production

Crisis of subsistence

Growing importance of non-farm sector

Emergence of elite as accumulation widens inequalities



4. *Post-modern* – deagrarianization

Integrated with wider world

Non-farm economy dominant; post-productivist village

Land no longer strategic resource

The central point is the suggestion that while the post-structuralist (post-developmental) claim may have some validity when viewed in the context of stages 1 and 2 in Figure 1, it breaks down when viewed in the context of stage 3 and, especially, stage 4. To elaborate: in the past, remoteness and isolation bestowed a degree of protection on people (Windle and Cramb 1999). Roads and market integration, in such a context, present serious concerns regarding threats to traditional livelihoods and widening inequalities. Some of the work noted above (for example Shore 2000; De Koninck 2000) provides forceful testimony of how destructive market integration can be when subsistence-oriented households and communities are rapidly, sometime brutally, integrated into the mainstream. This, perhaps, lies behind Bryceson's (2000: 300) comment that 'peasantries evince an enigmatic dual character as both partially autonomous and highly vulnerable producers'.

However, in the context of early twenty-first century Southeast Asia, threats to traditional livelihoods are being generated *within* the system as population growth, resource scarcities, and pressures of need press against the limits of subsistence. In such a context, roads and associated market integration become the means to boost livelihoods, rather than undermine them. Furthermore, extensive work on the critical role of non-farm activities in rural people's livelihoods from Africa, Latin America, and East and South Asia, shows that this observation is not restricted to Southeast Asia.⁹

⁹ For studies on other regions of the developing world see: Berry (1993), Bryceson (1996), Bryceson and Jamal (1997), Francis and Hoddinott (1993), Jamal and Weeks (1993) and Haggblade, Hazell and Brown (1989) on Africa; Francks, Boestal and Kim (1999), Parish, Zhe and Li (1995), and Kirkby and Zhao Xiaobin (1999) on East Asia; Zoomers and Kleinpenning (1996), and Lanjouw (1999) on Latin America; and Fisher and Mahajan (1997), and Chandrasekhar (1993) on South Asia.

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